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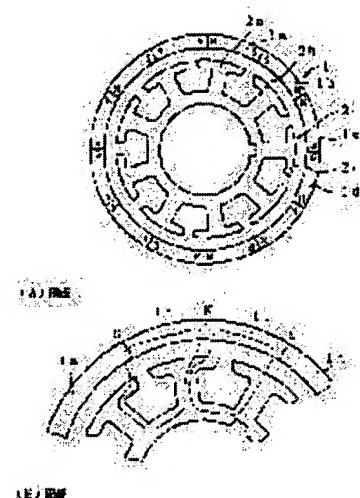
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## (54) MOTOR USING PERMANENT MAGNET

### (57)Abstract:

**PURPOSE:** To alleviate necessity of a yoke and to simplify a structure by alternately inverting the polarities of poles of a plurality of permanent magnets, arranging them in series, and employing the magnets as magnetic path forming parts.

**CONSTITUTION:** A plurality of permanent magnets 1a-1d are disposed in series, and the polarities of the adjacent magnets are inverted and arranged. That is, N-pole of the magnet 1a and N-pole of the adjacent magnet 1b are opposed to form a composite N-pole, and similarly S-pole of the magnet 1b and S-pole of the magnet 1c are opposed to form a composite S-pole. Similarly, the opposed parts of the magnets 1e, 1d form an N-pole, and thus N-pole, S-pole, N-pole,..., are alternately formed. If armature coils 15 are disposed oppositely to the plurality of the poles formed in this manner, an effective magnetic circuit can be formed, and a magnetic flux is not almost generated at the opposite side of an armature, and hence it is not always necessary to provide a yoke at the opposite side of the armature.



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